

## ABSTRACT

A fluid level monitoring system 20 includes an ultrasonic interrogation device 30 acoustically coupled to a sidewall 25 of container 22 and produces ultrasound that travels through the liquid 24 along a transverse path 32 and an inclined path 34. The liquid level  
5 is determined by calculating the times-of-flight for the received return signals, where the return signal along the inclined path 34 reflects from the intersection 27 of the liquid level 28 and a sidewall 23. The device 30 can be a multi-element transducer having a plurality of transducer elements at different angular orientations in a common housing.